INORGANIC CHEMICAL SYNONYMS

DARLING

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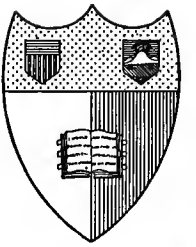

INORGANIC CHEMICAL SYNONYMS

AND OTHER USEFUL CHEMICAL DATA

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TO THE MEMORY OF

MY FATHER

WILLIAM A. DARLING

THIS BOOK IS

AFFECTIONATELY DEDICATED

PREFACE

This book is the outcome of a series of articles dealing with the subject which appeared in *The Chemical Engineer* in the early part of 1918. The work being the result of the writer's experience in the laboratory and his dealings with young chemists from the universities. It has been prepared with hope that it will fill a need which has repeatedly manifested itself in the struggles of the student to grasp quickly the laboratory significance of many terms often met with in persual of the average popular "trade" treatise describing this or that process.

Altho the work is intended primarily for the student, it is believed that the various terms employed to designate inorganic chemicals used in the industries will prove a convenience to the experienced chemist.

As it is almost impossible to cover the field, owing to the constant employing of new terms, the work cannot be called complete. Any corrections or suggestions will be greatly appreciated.

I here wish to tender my sincere thanks to Mr. Laurance T. Clark, formerly editor of *The Chemical Engineer*, for his valuable assistance.

E. R. D.

34 N. 21ST STREET,
EAST ORANGE, N. J.,
JULY 8, 1919.

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INTRODUCTION

"Chemical Colloquialisms"

It is a matter of common knowledge that some of the chemicals used in commercial work are known by as many as twenty varying terms or synonyms. It is also true that a single chemical may be known by terms which differ slightly or greatly according to the geographical location in which it chances to be in use. In short, colloquialisms spring up in the language of chemistry quite as readily as they do in any language, and such variations in nomenclature are often confusing to student and chemist alike. This is particularly true when the unhappy individual suddenly finds himself obliged to "read up"—in a hurry, perhaps—on some subject with which he is not thoroughly familiar.

Even in technical works devoted to the chemical industries, two writers will frequently employ different terms to designate the same chemical compound. The result is sometimes guesswork and ultimate abandonment of the treatise for another; at the very least it means annoying delay, accompanied by the fervent wish that one had a ready means of ascertaining whether "Alum Flour," "Potash Alum," and "Octahedral Alum Salt" all mean our laboratory friend

Aluminum Potassium Sulfate, or three entirely different compounds of aluminum.

The writer himself has frequently felt this need and knows it to exist. It is, indeed, surprising what a large percentage of students are familiar only with the true chemical terms and quite in the dark as to their synonyms. It would seem fitting that the latter part of the courses in inorganic chemistry should devote some time to this subject. In the absence of this, the following list of some of the more common chemicals and their synonyms has been prepared. The writer claims no originality for the synonyms, but only the bibliographical research of the material at hand.

While this work is intended primarily for the student, it is believed that the practical chemist will profit by it.

Fundamentals

For the reason that no work of reference would be quite complete without the inclusion of such fundamental matter as tables of the elements, atomic weights, specific gravity, etc., together with comparisons of the various systems of weight, capacity, volume and temperature measurement, the preface to the present, compilation will be further expanded by the presence of these facts and figures.

THE ELEMENTS

All of the elements at ordinary temperature are not in the solid state. Two are liquids and ten are gases. The liquid elements are bromine and mercury. The gaseous elements are oxygen, hydrogen, chlorine, fluorine, nitrogen, argon, helium, krypton, neon, and xenon.

The solid or metallic elements have at varying temperatures been liquefied with the exception of carbon. This element can only be softened when subjected to the highest known temperature.

The table of atomic weights was compiled by the International Committee on Atomic Weights consisting of F. W. Clarke, W. Ostwald, T. E. Thorpe, and G. Urbain.

Their Symbols and Atomic Weights

Aluminum	Al	27.1
Antimony	Sb	120.2
Argon	A	39.88
Arsenic	As	74.96
Barium	Ba	137.37
Bismuth	Bi	208.0
Boron	B	11.0
Bromine	Br	79.92
Cadmium	Cd	112.40
Caesium	Cs	132.81
Calcium	Ca	40.07

Carbon	C	12.00
Cerium	Ce	140.25
Chlorine	Cl	35.46
Chromium	Cr	52.
Cobalt	Co	58.97
Columbium	Cb	93.5
Copper	Cu	63.57
Dysprosium	Dy	162.5
Erbium	Er	167.7
Europium	Eu	152.0
Fluorine	F	19.0
Gadolinium	Gd	157.3
Gallium	Ga	69.9
Germanium	Ge	72.5
Glucinum	Gl	9.1
Gold	Au	197.2
Helium	He	3.99
Holmium	Ho	163.5
Hydrogen	H	1.008
Indium	In	114.8
Iodine	I	126.92
Iridium	Ir	193.1
Iron	Fe	55.84
Krypton	Kr	82.92
Lanthanum	La	139.
Lead	Pb	207.10
Lithium	Li	6.94
Lutecium	Lu	174.0
Magnesium	Mg	24.42
Manganese	Mn	54.93

Mercury	Hg	200.6
Molybdenum	Mo	96.0
Neodymium	Nd	144.3
Neon	Ne	20.2
Nickel	Ni	58.68
Niton	Nt	222.4
Nitrogen	N	14.01
Osmium	Os	190.9
Oxygen	O	16.00
Palladium	Pd	106.7
Phosforus	P	31.04
Platinum	Pt	195.2
Potassium	K	39.10
Praseodymium	Pr	140.6
Radium	Ra	226.4
Rhodium	Rh	102.9
Rubidium	Rb	85.45
Ruthenium	Ru	101.7
Samarium	Sa	150.4
Scandium	Sc	44.1
Selenium	Se	79.2
Silicon	Si	28.3
Silver	Ag	107.88
Sodium	Na	23.0
Strontium	Sr	87.63
Sulfur	S	32.07
Tantalum	Ta	181.5
Tellurium	Te	127.5
Terbium	Tb	159.2
Thallium	Tl	204.0

Thorium	Th	232.4
Thulium	Tm	168.5
Tin	Sn	119.
Titanium	Ti	48.1
Tungsten	W	184.
Uranium	U	238.5
Vanadium	V	51.
Xenon	Xe	130.2
Ytterbium or Neoytterbium	Yb	172.0
Yttrium	Yt	89.
Zinc	Zn	65.37
Zirconium	Zr	90.6

Their Discoveries and Dates of Discovery

In the following list helium will be found twice; the first date, 1868, refers to its discovery in the sun by Lockyer. It was again discovered in 1895 by Ramsay, who found it among the elements of the earth.

Although uranium was discovered in the early part of 1780 its radio-active properties were not known until 1896.

Mercury	Known to the ancients
Gold	Known to the ancients
Silver	Known to the ancients
Iron	Known to the ancients
Copper	Known to the ancients
Lead	Known to the ancients
Carbon	Known to the ancients

1450	Antimony	Valentine (Ger. Alchemist)
1450	Bismuth	Valentine (Ger. Alchemist)
1520	Zinc	Paracelsus (Swiss Chemist)
1694	Arsenic	Schroder (German)
1733	Cobalt	Brandt (German)
1738	Phosforus	Brandt (German)
1741	Platinum	Wood (English)
1751	Nickel	Cronstadt (Russian)
1766	Hydrogen	Cavendish (English)
1772	Nitrogen	Rutherford (English)
1774	Manganese	Gahn (Swedish)
1774	Oxygen	Priestley (English)
1780	Uranium	Klaproth (German)
1781	Tungsten	d'Elhujar (Spanish)
1782	Molybdenum ..	Hjilm (Swedish)
1782	Tellurium	Reichinstun (German)
1795	Titanium	Klaproth (German)
1797	Chromium	Vauguelin (French)
1801	Tantalum	Hatchett (English)
1801	Cerium	Berzelius and Hizinger (Swedish)
1801	Vanadium	Del Rio (Spanish)
1803	Osmium	Tennant (English)
1803	Palladium	Wollaston (English)
1804	Iridium	Tennant (English)
1804	Rhodium	Davy (English)
1807	Potassium	Davy (English)
1807	Sodium	Davy (English)
1808	Barium	Davy (English) and Berzelius (Swedish)

1808	Strontium	Davy (English)
1808	Boron	Davy (English) and Gay-Lussac (French)
1808	Magnesium ...	Davy (English)
1808	Calcium	Davy (English) and Berzelius (Swedish)
1810	Chlorine	Davy (English)
1810	Fluorine	Ampere (French)
1811	Iodine	Courtois (French)
1817	Selenium	Berzelius (Swedish)
1817	Lithium	Arfvedson (Swedish)
1817	Cadmium	Herman and Strohmeyer (German)
1823	Silicon	Berzelius (Swedish)
1824	Zirconium	Berzelius (Swedish)
1826	Bromine	Balard (French)
1827	Beryllium	Wohler (German)
1827	Aluminum	Wohler (German)
1828	Thorium	Berzelius (Swedish)
1828	Yttrium	Wohler (German)
1841	Lanthanum ...	Mosander (Swedish)
1843	Terbium	Mosander (Swedish)
1843	Erbium	Mosander (Swedish)
1844	Ruthinium ...	Claus (German)
1846	Columbium ...	Rose (English)
1860	Caesium	Bunsen and Kirchloff (German)
1862	Thallium	Crooks (English)
1863	Indium	Reich and Richer (Ger.)
1868	Helium	Lockyer (English)

1868	Rubidium	Bunsen (German)
1875	Gallium	Boisbaudran (French)
1878	Ytterbium	Marignac (French)
1879	Thulium	Cleve (Swedish)
1879	Scandium	Nilson (Swedish)
1879	Samarium	Boisbaudran (French)
1885	Praseodymium.	Welsbach (German)
1885	Neodymium ...	Welsbach (German)
1886	Gadolinium ...	Marignac (French)
1886	Germanium ...	Winkler (German)
1894	Argon	Rayleigh and Ramsay (English)
1895	Helium	Ramsay (English)
1897	Krypton	Ramsay and Travers (English)
1898	Xenon	Ramsay (English)
1898	Neon	Ramsay and Travers (English)
1898	Radium	Curie (French)

Occurrence of the Metals in Nature

Aluminum as the silicate.
Antimony as the sulfide.
Arsenic as the sulfide.
Barium as a sulfate.
Bismuth as the oxide, sulfide. Also metallic.
Cadmium as the oxide, carbonate, and sulfide.
Calcium as the carbonate, sulfate and silicate.
Chromium as the oxide.
Cobalt as the sulfide.

Copper as the sulfide, oxide and carbonate.
Iron as the oxide, sulfide and carbonate.
Lead as the sulfide.
Magnesium as the carbonate, sulfate and silicate.
Manganese as the oxide.
Mercury as the metal or sulfide.
Nickel as the sulfide.
Silver as the metal or sulfide.
Sodium as the chloride and silicate.
Strontium as the carbonate, sulfate, and silicate.
Tin as the oxide.
Zinc as the oxide, carbonate, and sulfide.

Classification of the Elements.

Class 1.—Typical Elements.

Class 2.—Elements whose oxides unite with water to form acids, never to form bases. Which do not form oxysalts.

Class 3.—Elements whose oxides unite with water, some to form bases, others to form acids. Which form oxysalts.

Class 4.—Elements whose oxides unite with water to form bases, never to form acids. Which form oxysalts.

Class 1. *Typical Elements*

Group 1.—Hydrogen. Group 2.—Oxygen.

Class 2. *Acidulous Elements*

Group 1.—Fluorine, Chlorine, Bromine, Iodine.
Group 2.—Sulfur, Selenium, Tellurium.
Group 3.—Nitrogen, Phosforus, Arsenic, Antimony.
Group 4.—Boron.
Group 5.—Carbon, Silicon.
Group 6.—Vanadium, Niobium, Tantalium.
Group 7.—Molybdenum, Tungsten, Osium.

Class 3. *Amphoteric Elements*

Group 1.—Gold.
Group 2.—Chromium, Manganese, Iron.

Group 3.—Uranium.
Group 4.—Lead.
Group 5.—Bismuth.
Group 6.—Titanium, Germanium, Zirconium, Tin.
Group 7.—Palladium, Platinum.
Group 8.—Rhodium, Ruthenium, Iridium.

Class 4. *Basylous Elements*

Group 1.—Lithium, Sodium, Potassium, Rubidium, Cesium, Silver.
Group 2.—Thallium.
Group 3.—Calcium, Strontium, Barium.
Group 4.—Magnesium, Zinc, Cadmium.
Group 5.—Beryllium, Aluminium, Gallium, Indium.
Group 6.—Nickel, Cobalt.
Group 7.—Copper, Mercury.
Group 8.—Cerium, Neodymium, Praseodymium, Erbium.
Group 9.—Yttrium, Lanthanum, Samarium, Ytterbium.
Group 10.—Thorium.

SPECIFIC GRAVITY AND TEMPERATURE COMPARISONS

Fahrenheit—Centigrade—Reaumur

Fahrenheit	Centigrade	Reaumur
+212.	+100.	+80.
210.2	99.	79.2
208.4	98.	78.4
206.6	97.	77.6
204.8	96.	76.8
203.	95.	76.
201.2	94.	75.2
199.4	93.	74.4
197.6	92.	73.6
195.8	91.	72.8
194.	90.	72.
192.2	89.	71.2
190.4	88.	70.4
188.6	87.	69.6
186.8	86.	68.8
185.	85.	66.
183.2	84.	67.2
181.4	83.	66.4
175.6	82.	65.6
177.8	81.	64.8
176.	80.	64.
174.2	79.	63.2
712.4	78.	62.4
170.6	77.	61.6

Fahrenheit	Centigrade	Reaumur
168.8	76	60.8
167.	75	60.
165.2	74	59.2
163.4	73	58.4
161.6	72	57.6
159.8	71	56.8
158.	70	56.
156.2	69	55.2
154.4	68	54.4
152.6	67	53.6
150.8	66	52.8
149.	65	52.
147.2	64	51.2
145.4	63	50.4
143.6	62	49.6
141.8	61	48.8
140.	60	48.
138.2	59	47.2
136.4	58	46.4
134.6	57	45.6
132.8	56	44.8
131.	55	44.
129.2	54	43.2
127.4	53	42.4
125.6	52	41.6
123.8	51	40.8
122.	50	40.
120.2	49	39.2
118.4	48	38.4

Fahrenheit	Centigrade	Reaumur
116.6	47	37.6
114.8	46	36.8
113.	45	36.
111.2	44	35.2
109.4	43	34.4
107.6	42	33.6
105.8	41	32.8
104.	40	32.
102.2	39	31.2
100.4	38	30.4
98.6	37	29.6
96.8	36	28.8
95.	35	28.
93.2	34	27.2
91.4	33	26.4
89.6	32	25.6
87.8	31	24.8
86.	30	24.
84.2	29	23.2
82.4	28	22.4
80.6	27	21.6
78.8	26	20.8
77.	25	20.
75.2	24	19.2
73.4	23	18.4
71.6	22	17.6
69.8	21	16.8
68.	20	16.
66.2	19	15.2

Fahrenheit	Centigrade	Reaum
64.4	18	14.
62.6	17	13.
60.8	16	12.
59.	15	12.
57.2	14	11.
55.4	13	10.
53.6	12	9.
51.8	11	8.
50.	10	8.
48.2	9	7.
46.4	8	6.
44.6	7	5.
42.8	6	4.
41.	5	4.
39.2	4	3.
37.4	3	2.
35.6	2	1.
33.8	1	0.
32.	0	0.

Conversion Factors for Fahrenheit, Centigrade, and Reaumur Scale.

$$\text{Degrees } \frac{\text{Fahrenheit} - 32}{1.8} = \text{degrees Centigrade.}$$

$$\text{Degrees } \frac{\text{Reaumur} \times 5}{4} = \text{degrees Centigrade.}$$

$$\text{Degrees Centigrade} \times 1.8 + 32 = \text{degrees Fahrenheit.}$$

$$\text{Degrees } \frac{\text{Reaumur} \times 9}{4} + 32 = \text{degrees Fahrenheit.}$$

$$\text{Degrees } \frac{(\text{Fahrenheit} - 32)4}{9} = \text{degrees Reaumur.}$$

$$\text{Degrees } \frac{\text{Centigrade} \times 4}{5} = \text{degrees Reaumur.}$$

Comparison of Specific Gravity with Degrees, Twaddle and Beaumé

Sp. Gr. at 15° C.	Degrees Bé.	Degrees Tw.
1.000	0.0	0
1.005	0.7	1
1.010	1.4	2
1.015	2.1	3
1.020	2.7	4
1.025	3.4	5
1.030	4.1	6
1.035	4.7	7
1.040	5.4	8
1.045	6.0	9
1.050	6.7	10
1.055	7.4	11
1.060	8.0	12
1.065	8.7	13
1.070	9.4	14
1.075	10.0	15
1.080	10.6	16
1.085	11.2	17
1.090	11.9	18
1.095	12.4	19
1.100	13.	20
1.105	13.6	21
1.110	14.2	22
1.115	14.9	23

Sp. Gr. at 15° C.	Degrees Bé.	Degrees Tw.
1.120	15.4	24
1.125	16.	25
1.130	16.5	26
1.135	17.1	27
1.140	17.7	28
1.145	18.3	29
1.150	18.8	30
1.155	19.3	31
1.160	19.8	32
1.165	20.3	33
1.170	20.9	34
1.175	21.4	35
1.180	22.	36
1.185	22.5	37
1.190	23.	38
1.195	23.5	39
1.200	24.	40
1.205	24.5	41
1.210	25.	42
1.215	25.5	43
1.220	26.	44
1.225	26.4	45
1.230	26.9	46
1.235	27.4	47
1.240	27.9	48
1.245	28.4	49
1.250	28.8	50
1.255	29.3	51

Sp. Gr. at 15° C.	Degrees Bé.	Degrees Tw.
1.260	29.7	52
1.265	30.2	53
1.270	30.6	54
1.275	31.1	55
1.280	31.5	56
1.285	32.	57
1.290	32.4	58
1.295	32.8	59
1.300	33.3	60
1.305	33.7	61
1.310	34.2	62
1.315	34.6	63
1.320	35.	64
1.325	35.4	65
1.330	35.8	66
1.335	36.2	67
1.340	36.6	68
1.345	37.	69
1.350	37.4	70
1.355	37.8	71
1.360	38.2	72
1.365	38.6	73
1.370	39.	74
1.375	39.4	75
1.380	39.8	76
1.385	40.1	77
1.390	40.5	78
1.395	40.8	79

Sp. Gr. at 15° C.	Degrees Bé.	Degrees Tw.
1.400	41.2	80
1.405	41.6	81
1.410	42.	82
1.415	42.3	83
1.420	42.7	84
1.425	43.1	85
1.430	43.4	86
1.435	43.8	87
1.440	44.1	88
1.445	44.4	89
1.450	44.8	90
1.455	45.1	91
1.460	45.4	92
1.465	45.8	93
1.470	46.1	94
1.475	46.4	95
1.480	46.8	96
1.485	47.1	97
1.490	47.4	98
1.495	47.8	99
1.500	48.1	100
1.505	48.4	101
1.510	48.7	102
1.515	49.	103
1.520	49.4	104
1.525	49.7	105
1,530	50.	106

Comparison of Specific Gravity and Degrees, Beaumé

For Liquids Heavier than Water

Degrees Bé.	Spec. Gravity at 12° C.	Degrees Bé.	Spec. Gravity at 12° C.
0	1.40	23	1.1896
1	1.0069	24	1.1994
2	1.0140	25	1.2095
3	1.0212	26	1.2198
4	1.0285	27	1.2301
5	1.0358	28	1.2407
6	1.0434	29	1.2515
7	1.0509	30	1.2624
8	1.0587	31	1.2736
9	1.0665	32	1.2849
10	1.0745	33	1.2965
11	1.0825	34	1.3082
12	1.0907	35	1.3202
13	1.0990	36	1.3324
14	1.1074	37	1.3447
15	1.1160	38	1.3574
16	1.1247	39	1.3703
17	1.1335	40	1.3834
18	1.1425	41	1.3968
19	1.1516	42	1.4105
20	1.1608	43	1.4244
21	1.1702	44	1.4386
22	1.1798	45	1.4531

Degrees Bé.	Spec. Gravity at 12° C.	Degrees Bé.	Spec. Gravity at 12° C.
46	1.4678	60	1.7116
47	1.4828	61	1.7322
48	1.4984	62	1.7532
49	1.5141	63	1.7748
50	1.5301	64	1.7960
51	1,5466	65	1.8195
52	1.5633	66	1.8428
53	1.5804	67	1.8590
54	1.5987	68	1.8640
55	1.6158	69	1.8850
56	1.6342	70	1.9090
57	1,6529	71	1.9350
58	1.6720	72	1.9600
59	1.6916		

For Liquids Lighter than Water

Degrees Bé.	Spec. Gravity at 12° C.	Degrees Bé.	Spec. Gravity at 12° C.
10	1.0000	21	0.9300
11	0.9932	22	0.9241
12	0.9865	23	0.9183
13	0.9799	24	0.9125
14	0.9733	25	0.9068
15	0.9669	26	0.9012
16	0.9605	27	0.8957
17	0.9542	28	0.8902
18	0.9480	29	0.8848
19	0.9420	30	0.8795
20	0.9359	31	0.8742

Degrees Bé.	Spec. Gravity at 12° C.	Degrees Bé.	Spec. Gravity at 12° C.
32	0.8690	47	0.7978
33	0.8639	48	0.7935
34	0.8588	49	0.7892
35	0.8538	50	0.7849
36	0.8488	51	0.7807
37	0.8439	52	0.7766
38	0.8391	53	0.7725
39	0.8343	54	0.7684
40	0.8295	55	0.7644
41	0.8249	56	0.7604
42	0.8202	57	0.7565
43	0.8156	58	0.7526
44	0.8111	59	0.7487
45	0.8066	60	0.7449
46	0.8022		

STANDARDS OF WEIGHTS AND MEASURES

By a mutual action taken by the governments of the world the International Bureau of Weights and Measures was established near Paris on the 20th of May, 1875. The standards were made of platinum-iridium in a ratio of nine parts of the former to one part of the latter. The originals are kept in the archives of the Bureau of Standards in Paris.

Duplicate standards have been sent to the various governments who are members of the bureau.

The standard of length is the meter and is a duplicate of the International Standard Meter. It was originally defined as the forty-millionth part of the quadrant of the meridan at Paris, and is the distance between two points at 0° C. on the original standard platinum-iridium bar.

The kilogram is the weight of a cylinder of the same alloy at 0° C. made in vacuo.

The litre is equal to a cubic decimeter. This is determined by measuring this quantity of distilled water at 4° C., which is the temperature of its greatest density. All weighings are made in vacuo.

As the metric system is the standard used by the chemist, such tables will be given. But for the student, comparisons with the other systems

will be given, as the metric system is not being universally taught as yet.

Weight

Metric System

Milligram	.001	Gram
Centigram	.01	Gram
Decigram	0.1	Gram
Gram	1000.	Grams
Dekagram	10.	Grams
Hectogram	100.	Grams
Kilogram	1000.	Grams
Myriangram	10.	Kilograms
Quintal	100.	Kilograms
Millier	1000.	Kilograms or 1 Ton

Metric to Avoirdupois

Milligram	0.01543	Grains
Centigram	0.1543	Grains
Decigram	1.543	Grains
Gram	15.43	Grains
Dekagram	5.6438	Drams
Hectogram	3,527	Ounces
Kilogram	2.2046	Pounds
Myriangram	22.046	Pounds
Quintal	1.9684	CWT.
Millier	1.1023	Short Ton

Avoirdupois to Metric

Grain	= 0.0648	Gram
Dram	= 1.772	Gram
Ounce	= 28.35	Grams
Pound	= .4536	Kilograms
Hundredweight	= 45.36	Kilograms
Ton	= .9071	Millier

Metric to Troy

Milligram	= .00487	Carats
Centigram	= .0487	Carats
Decigram	= 4.87	Carats or 1.5432 Grains
Gram	= 4.87	Carats or 1.5432 Grains
Dekagram	= 6.43	Pennyweight
Hectogram	= 3.215	Ounces
Kilogram	= 2.679	Pounds

Troy to Metric

Grain	= .0648	Gram
Pennyweight	= 1.5552	Grams
Ounce	= 31.103	Grams
Pound	= .3732	Kilogram

Metric to Apothecary

Milligram	= .0154	Grains
Centigram	= .154	Grains
Decigram	= 1.54	Grains
Gram	= .7716	Scruple
Dekagram	= 2.572	Drams

Hectogram	= 3.215	Ounces
Kilogram	= 2.679	Pounds

Apothecary to Metric

Grain	= .0648	Grams
Scruple	= 1.3	Grams
Dram	= 3.888	Grams
Ounce	= 31.103	Grams
Pound	= .3732	Kilogram

Capacity

Metric System

Milliliter	= 16.2	Minims
Centiliter	= .238	Fluid Ounces
Decileter	= .845	Gill
Liter	= 1.0567	Quarts
Decaliter	= 2.6417	Gallons
Hectoliter	= 264.17	Gallons
Kiloliter	= 264.17	Gallons

U. E. Equivalent to Metric

Gill	= 118.29	C. C.
Pint	= 0.4732	Liter
Quart	= 0.9464	Liter
Gallon	= 3.7854	Liter

Apothecaries' Liquid Capacity to Metric

Minim	= .0616	C. C.
Fluid Gram	= 3.7	C. C.

Fluid Ounce	= 29.57	C. C.
Pint	= .4732	Liter
Quart	= 0.9464	Liters
Gallon	= .7854	Liters

Volume

Metric System

Milliliter	= .06102	Cu. In.
Centiliter	= .6102	Cu. In.
Deciliter	= 6.102	Cu. In.
Liter	= 61.02	Cu. In.
Decaliter	= 610.2	Cu. In.
Hectoliter	= 3.5314	Cu. Ft.
Kiloliter	= 1.308	Cu. Yd.

U. S. Equivalent to Metric

Cubic Inch	= 16.387	C. C.
Cubic Foot	= 28.32	Liters
Cubic Yard	= 764.5	Liters

Conversion Factors

Cu. Cm.	÷	16.387	= Cu. In.
Cu. Cm.	÷	3.69	= Fl. Drs.
Cu. Cm.	÷	29.57	= Fl. Ounce
Cu. Meters	×	35.314	= Cu. Ft.
Cu. Meters	×	1.308	= Cu. Yds.
Cu. Meters	×	264.2	= Gallons
Centimeters	×	.393	= Inches
Centimeters	÷	2.54	= Inches

Grammes	×	15.432	= Grains
Grammes	÷	29.57	= Fl. Ounce
Grammes	÷	29.35	= Ounce. Av.
Hectoliters	×	3.53	= Cu. Ft.
Hectoliters	×	2.84	= Bu.
Hectoliters	×	1.31	= Cu. Yds.
Hectars	×	2.47	= Acres
Kilometers	÷	1.0693	= Miles
Kilometers	×	6.21	= Miles
Kilometers	×	3280.7	= Feet
Liters	×	61.023	= Cu. In.
Liters	×	33.84	= Fl. Oz.
Liters	×	26.42	= Gallons
Liters	÷	3.78	= Gallons
Liters	÷	28.317	= Cu. Ft.
Kilograms	×	2.2046	= Pounds
Kilograms	×	35.3	= Ozs. Av.
Kilograms	÷	1102.3	= Tons.

CHEMICAL SYNONYMS

Aluminum

Al. Wt. 27.5

Specific gravity 2.7, fuses at 450° C.; melting point 657° C.; boiling point above 2200° C. It is trivalent but is also looked upon (when expressed as the double atoms) as a single sexivalent atom.

The name aluminum is derived from the Latin word alumen. Alumen was a term used by the Romans in reference to bodies possessing an astringent taste.

The first mention made to alum was that of Pott in 1746 stated that the basis of it was clayey material. In 1754 Marggraf confirmed Pott's views, but added that there was a difference between alumina and lime.

Davy in 1807 and Oersted in 1824 tried to purify the metal, but were unsuccessful. In 1827 Wohler repeated the work of Oersted, and not having success, turned to the decomposition of the chloride with potassium and thus was the first to obtain the metal in its pure state.

Aluminum Acetate 204.17

Alumini Acetas
Aluminic Acetate
Mordant Salts

Waterproofing Salts
Printer's Acetate
Red Liquor
Oil Pulp
Fluid Gelatine

Aluminum Chloride 266.96
Alumini Chloridum
Aluminic Chloride
Chloralum
Muriate of Alumina
Sesquichloride of Aluminum

Aluminum Hydrate 120.22
Alumini Hydroxidum
Aluminic Hydrate
Aluminum Hydroxide
Hydrated Alumina
Hydrargillite (*native*)
Gibbsite (*native*)
Diaspori (*native*)

Aluminum Oxide 102.2
Alumini Oxidum
Aluminic Oxide
Alumina
Corundum
Rock Alum
Bauxite (*native*)

Aluminum Sulfate 342.41
Alumini Sulfas
Aluminic Sulfate
Concentrated Alum

Cake Alum
Patent Alum
Neutral Sulfate of Aluminum
Sesquisulfate of Aluminum
Vitrolate of Aluminum

Aluminum Potassium Sulfate 949.06
Potassic Aluminic Sulfas
Alumen
Alum
Alum Meal
Alum Flour
Cube Alum
Common Alum
Potash Alum
Potassium Alum
Sulfate of Aluminum and Potassium
Octahedral Alum Salt
Aluminite (*native*)

Dried Potassium Aluminum Sulfate 517.06
Alumini Exsiccatum
Alumini Ustum
Burnt Alum
Dried Alum
Exsiccated Alum
Double sulfate of Aluminum and Potassium
Roman Alum

Antimony

At. Wt. 120.2

Specific gravity 6.62, fuses at 450° C., melting point 630° C., boiling point 1440° C. It is trivalent in the antimonious condition and pentavalent in the antimonic.

Its name is derived from the Greek word *anti*, meaning against, and *monine*, the French word for monk. The reason for this was that a number of monks were poisoned by antimony compounds.

No doubt our knowledge of antimony would be much clearer had not the Alexandrian library been destroyed by the Romans. The true discovery of the metal cannot honestly be attributed to any one man.

Antimony is spoken of in the Bible in the book of Hebrews, and again in the second book of Kings. Dioscorides speaks of it as used by the women of his time as an eye-expander. The alchemist Geber was familiar with it. There is little or no doubt that the metal was known long before Valentine's time. Basil Valentine was, however, the first man to give any treatise on the subject. It is believed that his works were the result of a study made of the material scattered throughout the literature of that time. He

does, however, credit himself with the discovery of the metal.

Antimony Chloride 226.58

Antimonii Chloridum
Antimonious Chloride
Antimony Trichloride
Terchloride of Antimony
Chloride of Antimony
Caustic Antimony
Muriate of Antimony
Susquichloride of Antimony
Butter of Antimony
Mineral Butter

Antimony Trioxide 288.4

Antimonii Oxidum
Antimony Oxide
Antimonious Oxide
Anhydride of Antimony
Flowers of Antimony
Oxide of Antimony
Teroxide of Antimony
Trioxide of Antimony
Protoxide of Antimony
Hypantimonious Acid
White oxide of Antimony
Antimony Bloom
Valentinite (*native*)

Antimony Sulfide 336.61

Antimonii Sulfidum
Antimonious Sulfide

Antimony Trisulfide
Tersulfide of Antimony
Sulfide of Antimony
Sulfuret of Antimony
Sesquisulfide of Antimony
Antimony Glance
Antimony Black
Gray Antimony
Crude Antimony
Stibnite Antimonite
Stibnite
Sulfantimonious Anhydride
Antimony Vermillion
Glass of Antimony
Liver of Antimony
Crocus of Antimony

Antimony Pentasulfide 400.75
Antimonii Pentasulfidum
Antimonis Sulfide
Golden Sulfuret of Antimony
Sulfur Auratum
Sulfantimonic Anhydride
Antimony Red
Sulfur Gold

Antimony Potassium Tartrate 332.33
Antimonti et Potassii Tartras
Tartared Antimony
Tartarized Antimony
Tartaric Emetic
Emetic Tartar
Mordant Salts

Arsenic

At. Wt. 75.

Specific gravity 5.9. Melting point 850° C., but sublimes at 554° C. without fusing. It is trivalent in the arsenious condition and pentavalent in the arsenic.

Orpimint and realgar were both known to the ancients, Aristotle and Theophrastus both wrote of these products, but made no distinction between them.

The Greek alchemist Olympiodonis made mention of the white oxide in his writings. Albertus Magnus knew of the properties of arsenic and wrote of its being volatile. He was the first to give any reliable information concerning the element.

Arsenic Oxide 229.92

Arsenic Pentaoxide
Arsenic Acid Anhydride
Anhydrous Arsenic Acid
Arsenic Anhydride

Arsenic Disulfide 214.06

Arsenic Disulfidum
Arsenic Bisulfide
Diarsenious Disulfide
Realgar
Red Sulfide of Arsenic
Red Sulfuret of Arsenic

Arsenic Trisulfide 246.13

Arsenious Sulfide
Yellow Sulfide of Arsenic
Orpimint
Sesquisulfide of Arsenic
Tersulfuret of Arsenic
Tersulfide of Arsenic
King's Gold
Arsenic Yellow
Sulfo-arsenious Anhydride
King's Yellow
Arsenic Orange
Auripigment

Arsenious Oxide 187.92

Arsenici Oxidum
Arsenious Anhydride
Arsenic Trioxide
Acidum Arsenosum
Arsenious Acid
Arsenicum Album
White Arsenic
Arsenic
Poison Flour
Flowers of Arsenic
Anhydrous Arsenious Acid
Anhydrous Arsenicosum
Metallum Album
Arseni Trioxidum
Arsenic Blanc
Arsenolite (*native*)

Arsenic Chloride 181.34

Arseni Chloridum
Trichloride of Arsenic
Chloride of Arsenic
Terchloride of Arsenic
Sesquichloride of Arsenic
Muriate of Arsenic
Butter of Arsenic
Fuming Liquid of Arsenic

Barium

At. Wt. 137.37

Specific gravity, 3.78; fuses below red heat, melting at 850° C. and boiling at 950° C. It is divalent.

Barium first became known through one of its compounds, heavy spar. A Bolognese shoemaker, V. Cascionolus, in 1602, noticed that when this product was heated with carbonaceous matter it became phosforesent. To this was given the name lopis solis, Bolognian phosforous, and Boronian phosforous. Marggraf in 1750 supplied the knowledge that it contained sulfuric acid.

In 1774 Scheele, during some researches on the black oxide of manganese, found it to contain a new earth. This product with sulfuric acid formed a compound which was insoluble in water. He did not carry out any further work on it. Gahn in 1776 showed that it was the same compound found in heavy spar.

Guyton de Moroeau in 1779 gave it the name of barote, which was changed to baryta by Lavoisier. The metal was first isolated by Davy.

Barium Carbonate 197.37

Barii Carbonas
Carbonate of Baryta
Baric Carbonate
Witherite (*native*)

Barium Hydroxide 315.51
Barii Hydroxidum
Barcum Hydrate
Milk of Barium
Hydrate of Baryta
Caustic Baryta
Barium Oxide 153.37
Barii Oxidum
Barium Monoxide
Baryta
Barytes
Oxide of Barium
Caustic Baryta
Baric Oxide
Barium Sulfate 233.44
Barii Sulfas
Blanc Fixe
Constant White
Terra Ponderosa
Sulfate of Barium
Vitriolate of Barium
Baric Sulfate
Permanent White
Heavy Spar (*native*)
Heavy White (*native*)
Barite (*native*)
Barium Chromate 253.47
Barii Chromas
Lemon Chrome
Ultramarine Yellow

Bismuth

At. Wt. 208.

In the writing of the alchemists of the thirteenth century mention is made of the word Marcasite, which at that time referred to bismuth. As early as the time of Paracelsus an attempt was made to classify it. He placed it with the semi-metals. Agricola stated that it was a true metal but required the presences of tin. Libavius associated it with antimony, Lemery with zinc and Basil Valentine between tin and lead.

But our true knowledge of the properties and reactions of bismuth was given to us in 1739 by Pott and Bergman.

It has a specific gravity of 9.75, fuses at 264° C.; melting point, 270° C., and has a boiling point of 1420° C. In the bismuthous state it is trivalent, and in the bismuthic state it is pentavalent.

Basic Bismuth Carbonate 526.02

Bismuthi Subcarbonas
Bismuthi Oxycarbonate
Bismuth Subcarbonate
Subcarbonate of Bismuth
Bismuth Carbonate
Bismuthyl Carbonate
Pearl White
Bismutite (*native*)

Basic Bismuth Chloride 259.46

Bismuthi Oxychloridum
Bismuthi Oxychloridum
Bismuthyl Chloride
Oxychloride of Bismuth
Bismuthous Chloride
Cosmetic Bismuth

Basic Bismuth Nitrate 304.03

Bismuthi Oxynitras
Bismuthi Subnitras
Bismuthum Album
Calx Bismuthi
Oxynitrate of Bismuth
Bismuthyl Nitrate
Basic Nitrate of Bismuth
Pearl White
Flake White

Cadmium

At. Wt. 112.4

It has a specific gravity of 8.6, a fusing point of 228° C., melts at 321° C., boils at 778° C. and has a valency of two.

Cadmium was discovered at about the same time in 1817 by two independent workers under varied conditions. Strohmeyer, one of the two to whom the credit for its discovery was given, while engaged in some work on a sample of zinc carbonate, obtained from the zinc mines at Salzgitter, noticed that the oxide contained a yellow color, yet was free from iron. In 1818 he published a full account of his work and also named the element.

Hermann, at the same time, made an examination of a sample of zinc oxide which was used for pharmaceutical purposes and which had been rejected because, upon treatment with acid, it gave a yellow solution. He announced a new metal.

Shortly after Strohmeyer and Hermann made known their work on the new element, Meissner and Karster confirmed their report.

Cadmium Chloride 219.35

Chloride of Cadmium
Muriate of Cadmium
Cadmic Chloride
Butter of Cadmium

Cadmium Oxide 128.4
Cadmii Oxidum
Cadmic Oxide
Protoxide of Cadmium
Cadmium Sulfate 280.53
Cadmii Sulfas
Sulfate of Cadmium
Vitriolate of Cadmium
Cadmic Sulfate
Cadmium Sulfide 144.47
Cadmii Sulfidum
Cadmic Sulfic
Cadmium Yellow
Jaune Brillant
Greenockite (*native*)

Calcium

At. Wt. 40.07

Although metallic calcium was not prepared until 1808 by Davy, its compounds were used by the ancients.

The use of lime in the preparation of mortar for building belongs to the pages of unknown history. Dioscorides and Pliny, in their writings, give a very complete description of the process for lime-burning and slaking.

This metal has a specific gravity of 1.545, melting point 800° C. and sublimes a little above this point. It has a valence of two.

Calcium Acetate 176.13

Calcii Acetas
Diacetate of Lime
Pyrolignite of Lime
Vinegar Salts
Brown Acetate
Vinegar Salts
Brown Acetate
Grey Acetate

Calcium Carbonate 100.07

Calcii Carbonas Precipitatus
Precipitated Chalk
Spanish White
Carbonate of Lime
Spanish Whiting

Whiting
Paris White
English White
Limestone (*native*)
Marble (*native*)
Calcite (*native*)
Aragonite (*native*)

Calcium Chloride 110.99
Calcii Chloridum
Chloride of Calcium
Muriate of Lime
Muriate of Calcium

Calcium Fluoride 78.07
Calcii Fluoridum
Fluor Spar

Calcium Hydroxide 74.09
Calx Extincta
Aqua Calcis
Calcium Hydrate
Slack Lime
Calcic Hydrate
Lime Water
Solution of Lime
Caustic Lime

Calcium Hypochlorite 215.05
Calx Chlorinata
Calx Chlorata
Chlorinated Lime
Bleaching Powder
Chloride of Lime (*improperly called*)

Calcium Oxide 56.07
Calx
Calx Uiva
Caustic Lime
Quick Lime
Lime
Calcic Oxide
Burned Lime
Unslacked Lime
Calcium Sulfate 172.17
Calcii Sulfas
Pearl Hardener
Gypsum (*native*)
Silenite (*native*)
Alabaster (*native*)
Dried Calcium Sulfate 136.14
Calcii Sulfas Exsiccatus
Anhydrous Calcium Sulfate
Plaster of Paris
Dried Gypsum
Calcined Gypsum
Bihydrate of Lime
Calcined Plaster
Vitriolate of Lime
Vitriolate of Calcium
Calcium Phosfate 310.29
Calcii Phosfas
Phosfate of Lime
Bone Ash (*crude*)
Bone Earth (*crude*)
Tricalcic Phosfate

Chromium

At. Wt. 52.

It has a specific gravity of 6.92, melting point 1050° C. and boiling point 2200° C.

A peculiar feature of chromium is its atomicity, which is diatomic, tetratomic, and hexatomic. It has also shown octatomicity.

Our first notice regarding chromium was contained in a private communication of Lehmann in 1762. For the benefit of a friend he described a new mineral which came from Siberia. Nothing definite was done regarding its composition until twenty-seven years later, when Vauquelin and Macquart investigated the mineral. Their results were not satisfactory, but they concluded that it contained a large quantity of lead and oxygen. In 1797 Macquart, not feeling satisfied with the results he had previously obtained, carried out a new investigation. He found that the lead was combined with the oxide of a new metal. To this was given the name Chromium. The mineral from which the study was made is now called Crocoisite.

Chromium Dichloride 122.92

Chromii Dichloridum
Chromous Chloride
Muriate of Chrome

Protochloride of Chrome
Butter of Chrome

Chromous Oxide 84
Protoxide of Chromium
Dioxide of Chromium
Green Oxide of Chrome
Chrome Green

Chromium Oxide 100
Chromii Oxidum
Chromic Oxide
Chromium Sesquioxide

Chromium Trioxide 152
Chromii Trioxidum
Acidum Chromicum
Chromic Acid
Chromic Anhydride
Anhydrous Chromic Acid

Chromium Sulfate 482.29
Chromii Sulfas
Vitrolate of Chromium
Wool Mordant

Cobalt

At. Wt. 58.97

Cobalt has a specific gravity of 8.72 and melting point 1490° C. The valency in the cobaltous compounds is two, and four in the cobaltic.

The name cobalt carries us back to the days of Paracelsus and "Basil Valentine." In those days it was not used to denote the element, but meant instead "false ore."

In 1733 Brandt came to the conclusion that the blue color of glass was caused by a peculiar metal in the mineral used in its manufacture. He gave it the name of "kobalt."

Cobalt Chloride 129.89

Cobaltum Chloridum
Muriate of Cobalt
Hydrochloride of Cobalt
Dichloride of Cobalt
Cobaltous Chloride
Butter of Cobalt

Cobalt Oxide 74.97

Cobaltum Oxidum
Cobalt Protoxide
Oxide of Cobalt
Cobalt Black
Gray Oxide of Cobalt
Black Oxide of Cobalt
Cobalt Monoxide
Cobaltous Oxide
Asbolite (*Native*)

Copper

At. Wt. 36.57

It has a specific gravity of 8.9, melts at 1065° C. and boils at 2310° C. It is diatomic in valency.

Copper was probably the first metal to be used by mankind. The reason for this was that it occurred in the native condition, and did not require any further treatment.

Copper Chloride 170.52
Cupri Chloridum
Cupric Chloride
Subchloride of Copper
Muriate of Copper

Cupric Oxide 79.57
Cupri Oxidum
Black Oxide of Copper
Copper Monoxide
Protoxide of Copper
Melaconite (*Native*)

Copper Oxide 143.14
Cuprous Oxide
Red Oxide of Copper
Dinoxide of Copper

Copper Sulfate 249.72
Cupri Sulfas
Sulfate of Copper

Copper Deutosulfate
Blue Copperas
Blue Stone
Blue Vitriol
Roman Vitriol
Salzburg Vitriol

Iron

At. Wt. 55.84

It is also known as Ferrum.

Iron has a specific gravity of 7.8, melts at 1505° C., and boils at 2450° C.

It has a valency of two when the salts are ferrous, and four when ferric.

Iron is another of those few elements, the history of which began with the history of mankind.

Ferrous Carbonate 133.86.

Ferri Carbonas
Ferri Subcarbonas
Carbonate of Iron
Protocarbonate of Iron

Ferric Chloride 270.32

Ferri Chloridum
Ferri Perchloridum
Ferri Sesquichloridum
Iron Chloride
Sesquichloride of Iron
Perchloride of Iron
Trichloride of Iron
Muriate of Iron

Ferric Oxide 159.68

Ferri Oxidum
Ferri Sesquioxidum
Ferri Rubigo
Rubigo

Ferri Peroxidum
Ferri Oxidum Rubrum
Peroxide of Iron
Red Oxide of Iron
Iron Rust
Sesquioxide of Iron
Crocus Ferri
Crocus Martis
Ferrugo
Polishing Crocus
Jeweler's Rouge
Venetian Red
Stone Red
Purple Oxide
Scarlet Red

Ferrous Oxide 71.84

Ferri Oxidum
Monoxide of Iron
Iron Monoxide
Suboxide of Iron
Iron Suboxide

Ferrous Sulfate 278.02

Ferri Sulfas
Ferrum Vitriolatum
Protosulfate of Iron
Sulfate of Iron
Copperas
Green Vitriol
Sal Chalybis
Salts of Steel

Vitriolate of Iron
Iron Vitrol

Ferric Sulfate 562.03
Ferri Tersulfas
Persulfate of Iron
Sesquisulfate of Iron
Tersulfate of Iron

Lead (Plumbum)

At. Wt. 207.1

Lead melts at 327° C. and boils at 1525° C. It has a valency of two and four.

This metal was known to the ancients. It was supposed to have been one of the seven metals known to the ancients and to have been connected with the seven heavenly bodies. Thus lead was apportioned to Saturn.

Lead Acetate 379.20
Plumbi Acetas
Plumbic Acetate
Sugar of Lead
Goulard Powder

Lead Carbonate 267.10
Plumbi Carbonas
Plumbic Carbonate
Flake Lead
White Lead
Ceruse
Lead Spar
Cerussite (*native*)

Lead Chromate 323.10
Plumbi Chromas
Plumbic Chromate
Chrome Yellow
Paris Yellow

Leipzic Yellow
Crocosite (*native*)

Lead Chloride 277.02
Plumbi Chloridum
Plumbic Chloride
Muriate of Lead
Horn Lead (*native*)

Lead Oxide 223.10
Plumbi Oxidum
Plumbic Oxide
Lead Monoxide
Lead Protoxide
Massicot
Brown Lead Oxide
Litharge (*native*)

Lead Dioxide 239.10
Plumbi Dioxidum
Plumbic Peroxide
Binoxide of Lead
Lead Peroxide
Black Lead
Puce

Lead Sulfate 303.17
Plumbi Sulfas
Plumbic Sulfate
Vitriolate of Lead
Anglisite (*native*)

Magnesium

At. Wt. 24.32

This metal has a specific gravity of 1.74, melts at 650° C. and boils at 1120° C. It has a valence of two.

Although magnesium was obtained as a metal in 1808, our knowledge of its history goes back to 1695. At that time a London physician published an account of a new salt found in the springs at Epsom. Shortly after this publication the medical value of the salt became known, being termed epsom salts. By 1700 several springs in England were found to contain it. Soon another medical salt, Magnesia Alba, was discovered by a Roman. Several methods were soon put forward for its preparation. In 1755 Black made an attempt to study the composition of these salts. Bergman made a more complete study in the same year, but it was Davy who, in 1808, proved that this compound was the oxide of anew metal and called it "magnium," which name soon gave place to "magnesium."

Magnesium Carbonate 485.70

Magnesii Carbonas

Basic Carbonate of Magnesium

Magnesium Alba

Magnesium Chloride 203.34

Magnesii Chloridum

Muriate of Magnesium

Magnesium Oxide 40.32
Magnesii Oxidum
Magnesia
Calcined Magnesia
Magnesia Ponderosa
Light Magnesia Calcined
Light Magnesium Oxide
Light Magnesia
Heavy Magnesia
Heavy Magnesium Oxide
Periclasite (*native*)
Magnesium Sulfate 246.50
Magnesii Sulfas
Sal Catharticum Amar
Magnesia Viriolata
Epsom Salts
Salts
Bitter Salt
Hair Bitter
Kieserite (*native*)

Manganese

At. Wt. 54.93

It has a specific gravity of 7.42 and its melting point is 1225° C. It boils at 1900° C. and its valency is two, three and four.

The black oxide of Manganese has been known from the earliest times and was associated with magnetic iron ore. In fact, many of the alchemists believed it to be an ore of iron. Much mention was given to it in literature on glass making and long Latin manuscripts are found setting forth its uses.

In 1740 the first study of the oxide was made. At that time Pott proved that the product was free from iron. The year 1774 saw the renowned investigation of Scheele, who made such an exhaustive study of mineral manganese and its action towards oxygen. Using Scheele's experiments as a basis Bergman came to the conclusion that it was the calx of a new metal. Gahn was, however, the first to isolate this metal.

Manganese Chloride 197.1

Mangani Chloridum
Muriate of Manganese
Protochloride of Manganese

Manganese Dioxide 86.93

Mangani Dioxidum

Mangani Oxidum Nigrum
Manganesii Peroxidum
Manganic Dioxide
Binoxide of Manganese
Black Oxide of Manganese
Peroxide of Manganese
Psilomelane
Pyrolusite (*native*)

Manganese Sulfate 223.06
Mangani Sulfas
Manganese Vitriolate

Mercury (Hydrargyrum)

At. Wt. 200.6

It has specific gravity of 13.6. The melting point is 38.85° below zero; its boiling point is 357.33° C. The atomicity is two in the mercuric compounds and pseudo-monatomic in the mercurous.

Although mercury is one of the oldest of metals, no mention of it is to be found in old Greek writings. Theophrastus called it "liquid silver" and Dioscorides called it "silver water"; both gave a method for preparing it from cinnabar. Pliny was the first to give it the name of Hydrargyrum, and used the name only for the pure metal.

The first mention of the properties of mercury was made in 1610 by Isidorus.

The first dicpute as to which class mercury belonged in was raised by Agricola and Libavius. The former classed it with the metals and the latter with the semi-metals. It is not until 1759 when Braune, of St. Petersburg, succeeded in freezing it, that the question was settled.

Ammonium Mercuric Chloride 253.09

Hydrargyri Ammoniatum
Hydrargyri Ammonio-Chloride
Hydrargyri Praecipitatum Album
Mercuric Ammonium Chloride

Mercurius Precipitatus Albus
Chloride of Mercuric Ammonium
Mercuro Ammonium Chloride
Calx Hydrargyri Alba
Ammonio-Chloride of Mercury
Amido Chloride of Mercury
Ammoniated Mercury
Infusible White Precipitate
White Precipitate

Ammonium Mercurous Chloride 453.69

Nigri Precipitatus
Black Precipitate
Black Mercury
Haheman's Mercury

Mercuric Chloride, 271.52

Hydrargyri Corrosivum Sublimatas
Hydrargyri Muriaticum Corrosivum
Hydrargyri Chloridum Corrosivum
Hydrargyri Perchloridum
Hydrargyri Permurias
Hydrargyri Supermurias
Bichloride of Mercury
Perchloride of Mercury
Corrosive Chloride of Mercury
Corrosive Sublimate
Dimuriate of Mercury

Mercurous Chloride 236.06

Hydrargyri Chloridum
Hydrargyri Chloridum Mite
Hydrargyri Murias

Hydrargyri Submurias
Mercurius Dulcis Precipitatum
Mercurius Dulcis Sublimatis
Calomelas
Calomel
Panacea of Mercury
Mild Mercurous Chloride
Sub-chloride of Mercury
Protochloride of Mercury
Muriate of Mercury
Mercury Chloride

Mercuric Iodide 454.44
Hydrargyri Iodidum Flavum
Hydrargyri Pro-Iodiret
Hydrargyri Iodidum Viridi
Yellow Iodide of Mercury
Yellow Mercurous Iodide
Subiodide of Mercury
Proto-Iodide of Mercary
Protiodide of Mercury.
Brilliant Scarlet

Mercuric Iodide 327.52
Hydrargyri Iodidum Rubrum
Hydrargyri Biniodide
Deuto-joduretum Hydrargyri
Biniodide of Mercury
Red Iodide of Mercury
Red Mercuric Iodide

Mercury Sulfide 232.67
Hydrargyri Sulfidum

Ethiop's Mineral
Cinnabar (native)
Factitious Cinnabar

Mercuric Oxide 216.60

Hydrargyri Oxidum Flavium
Hydrargyri Oxidum Rubrum
Mercurius Corrosivus Rubr
Red Oxide of Mercury
Red Mercuric Oxide
Red Precipitate
Yellow Oxide of Mercury
Yellow Mercuric Oxide
Calcined Mercury
Monoxide of Mercury

Mercurous Oxide 417.20

Hydrargyri Syboxidum
Black Oxide of Mercury
Gray Oxide of Mercury
Suboxide of Mercury
Proto-Oxide of Mercury
Dioxide of Mercury

Nickel

At. Wt. 58.68

It has a specific gravity of 8.7 It has a melting point of 1,450° C. It has a valency of two in the nickelous condition, and four in the nickelic condition.

Our first knowledge of nickel is found in the writing of Hiarni, who in 1694 speaks of it as "false copper." It was so called because although, possessing the color of copper ore, the metal could not, however, be separated from it. In 1751 Cronstedt published an investigation on an ore from the Helsingland mines. He obtained a salt which gave a green vitriol and a hard brittle metal. In 1754 he wrote of it as a semi-metal and called it nickel.

His views were not accepted until 1774, when Bergman's researches confirmed his work.

Nickel Oxide 74.68
Nickelous Oxide
Protoxide of Nickel
Nickel Black

Nickel Sulfate 262.85
Electrolytic Salts
Blue Salts

Nickel Sulfide 90.75
Black Sulfide of Nickel
Capillary Pyrites

Potassium

At. Wt. 39.10

Melts at 62.5° C. and boils at 757.5° C. It has a specific gravity of .875 and a valency of one.

The discovery of potassium was made by Davy in 1807. It was obtained from potash by electrolysis.

Potassium Bicarbonate 100.11

Potassii Bicarbonas
Acid Carbonate of Potash
Sesqui-carbonate of Potash

Potassium Carbonate 174.23

Potassii Carbonas
Kali Praeparatum
Fixed Nitre
Pearl Ash
Pearl Ashes
Salt of Tartar
Salt of Wormwood

Potassium chlorate 122.56

Potassii Chloras
Oxymuriate of Potash

Potassium Chloride 74.56

Bitter Salts
Febrifuge Salt
Digestive Salt of Sylvius

Potassium Ferricyanide 329.20

Red Prussiate of Potash
Potassae Prussias Rubra

Potassium Ferrocyanide 422.35
Potassii Ferrocyanidum
Potassae Prussias Flava
Yellow Prussiate of Potash

Potassium Hydroxide 56.11
Potassa
Potassae Hydras
Hydrate of Potash
Caustic Potash

Potassium Acetate 98.12
Potassii Acetas
Diuretic Salts
Sal Diureticus

Potassium Bisulfate 136.18
Potassae Supersulfas
Supersulfate of Potash
Acid Potassium Sulfate

Potassium Nitrate 101.11
Potassii Nitras
Saltpetre
Nitre
Sal Prunella

Potassium Sulfide 110.27
Potassa Sulfurata
Potassii Sulfuratum
Hepar Sulfur
Liver of Sulfur

Potassium Bitartrate 188.14
Potassii Bitartras
Potassae Supertartras
Potassae Supertartus
Acid Potassium Tartrate
Tartar
Cream of Tartar
Cremor Hartari
Supertartrate of Potash
Potassium and Sodium Tartrate 280.18
Potassii et Sodii Tartras
Tartrated Soda
Rochelle Salt
Sal Seignette

Silver

At. Wt. 107.88

Silver has a melting point of 955° C., boiling point 1,955° C. Its valency is one.

Silver is another of those elements whose history must remain a romance. The alchemists spoke of it as "Luna" or "Diana" and represented it by the symbol of the crescent moon.

Silver Chloride 143.34
Argenti Chloridum
Butter of Silver
Horn Silver
Muriate of Silver

Silver Nitrate 169.89
Argenti Nitras
Lapis Caustic
Luna Caustic

Silver Sulfide 247.83
Argenti Sulfidum
Silver Glace

Sodium

At. Wt. 23.

It has a specific gravity of 0.97.35. It melts at 97.3° C. and boils at 877.5° C. The valency is one.

It is to the Old Testament that we turn for our history of the sodium compounds. There reference is made to sodium carbonate, although it was then called "Nether." In Egypt it was calledy "Flos Satis." Down through the ages the salts of sodium were common, and much use was made of them. It was not, however, until 1807 that Davy prepared the metallic Sodium.

Sodium Bicarbonate 84.01

Sodii Bicarbonas
Acid Carbonate of Soda
Hydrosodic Carbonate
Sesquicarbonate of Soda
Vichy Salts

Sodium Carbonate 106.00

Sodii Carbonas
Crystal Carbonate
Fixed Mineral Alkali
Natron
Natrum
Scotch Soda
Soda Crystals

Trona
Washing Soda
)dium Chloride 58.46

Sodium Sulfate 268.18
Sodii Sulfas
Natron Vitrolate
Glauber's Salt
Sal Glauberi
Salt Cake
Sodium Silicate 303.20
Sodium Tetrasilicate
Silicate of Soda
Soluble Glass
Water Glass
Sodium Thiosulfate 248.22
Sodii Thiosulfas
Antichlor
Hypo
Hyposulfite of Soda

Zinc

At. Wt. 65.37

Zinc melts at 419° C. and boils at 918° C. It has a valency of two.

An alloy of zinc and copper was known to the ancients, who believed it to be a peculiar form of copper. It was not until the year 4 B. C. that Aristotle discovered that this metal could be prepared from copper and a peculiar earth found on the shores of the Black Sea. To this product Dioscorides and Pliny gave the name "Cadmia."

In the writings of Paracelsus (1520) we find zinc spoken of as a metal and it is to him we give the credit of its discovery as such.

Zinc Chloride 136.29

Zinci Chloridum
Butter of Zinc
Muriate of Zinc

Zinc Oxide 81.37

Zinci Oxidum
Flowers of Zinc
Nil Alba
Nil Album
Oxide of Zinc
Zinc Powder
Zinc White

Zinc Sulfate 354.80
Zinci Sulfas
Salt of Vitriol
White Copperas
White Vitriol

Miscellaneous Synonyms

Aerugo—*Basic Carbonate of Copper.*
Alkaline Pink Mordant—*Sodium Aluminate.*
Alkaline Red Mordant—*Chloride and Sulfate of Zinc.*
American Vermillion—*Basic Lead Chromate.*
Anardouis Green—*Hydrated Chromium Sesquioxide.*
Basic Chloride—*Antimony Oxychloride.*
Bay Salt—*Sodium Chloride.*
Black Salt—*Impure Sodium Carbonate.*
Blanguette—*Crude Soda.*
Blue Sympathetic Ink—*Solution of Cobaltous Chloride.*
Blue Verditer—*Hydrated Cupric Oxide.*
Bone Earth—*Crude Calcium Phosfate.*
Bremen Blue—*A mixture of Copper Hydrate, Carbonate, and Oxychloride.*
Bronze Liquor—*Solution of Magnesium Chloride.*
Burnett's Fluid—*Solution of Zinc Chloride.*
Chemic—*Solution of Bleaching Powder.*
Chinese Red—*Basic Lead Chromate.*
Chromate Red—*Basic Lead Chromate.*
Cobalt Blue—*A mixture of fused Cobalt Phosfate.*
Donovan's Solution—*A solution of Arsenious and Mercuric Iodides.*
Dung Salt—*Sodium Arsenate.*

English Powder—*Antimony Oxychloride.*
Emerald Green—*Aceto-Arsenite of Copper.*
Freezing Salts—*Calcium Chloride.*
Fumerole—*Crude Boric Acid.*
Fusible Salt—*Ammonium Phosfate.*
Goulard Water—*A solution of Subacetate of Lead.*
Hard Lead—*Mixture of Lead and Antimony.*
Hepar Sulfuris—*A mixture of Dipotassium Trisulfide and Potassium Sulfate.*
Homberg's Pyrophosforus—*Carbonized mixture of Alum and Sugar.*
Lanarkite—*A mixture of Lead Sulfate and Lead Carbonate.*
Laughing Gas—*Nitrous Oxide.*
Lithopone—*A mixture of Barium Sulfate and Zinc Sulfide.*
Liver of Sulfur—*A mixture of Dipotassium Trisulfide and Potassium Sulfate.*
Magnetic Oxide—*Ferrous-Ferric Oxide.*
Massicot—*Lead Monoxide.*
Mendipite—*Lead Oxychloride.*
Mineral Orange—*Lead Tetroxide.*
Meerschaum—*Magnesium Silicate.*
Metallic Oil—*Chloride of Antimony.*
Metallic Oil—*Chloride of Arsenic.*
Paris Green—*Aceto-Arsenite of Copper.*
Patterson's White Lead—*Lead Oxychloride.*
Persalts of Iron—*The Ferric Salts.*
Pickling Liquor—*Impure solution of Ferrous Sulfate.*

Pink Crystals—*Manganese Chloride.*
Prosalts of Iron—*The Ferrous Salts.*
Powder of Algaroth—*Antimony Oxychloride.*
Red Liquor—*Impure Caustic Soda.*
Red Prussiate—*Potassium Ferricyanide.*
Rhodanate—*Alumina Sulfocyanide.*
Ruducite—*Sodium Hydrosulfite.*
Sal Gem—*Sodium Chloride.*
Sal Mixte—*Mixture of Magnesium Sulfate and Sodium Chloride.*
Salts of Alembroth—*A mixture of Mercuric Chloride and Sal Ammoniac.*
Salt Perlate—*Sodium Acid Phosfate.*
Salt Sedative—*Boric Acid.*
Salts of Sorrel—*Oxalic Acid.*
Salts of Tin—*Stannic Chloride.*
Schlippe's Salt—*Sodium Sulfantimoniate.*
Schleele's Green—*Copper Arsenite.*
Smalls—*Native Iron Sulfide.*
Samlt—*Ground Potash Cobalt Glass.*
Soda Chem—*Solution of Sodium Hypochlorite.*
Terra Verda—*Earth Pigment containing Ferrous Silicate.*
Tincal—*Sodium Borate.*
Tinkal—*Crude Borax.*
Tin Oil—*Stannous Chloride and Oleic Acid.*
Tin Stone—*Stannic Oxide.*
Turner's Yellow—*Lead Oxychloride.*
Verdigric—*Basic Copper Acetate.*
Weldon Mud—*Acid Calcium Manganite.*

White Paste—*Copper Sulfocyanide.*
White Precipitate—*Mercuro-Ammonia Chloride.*
Yellow Liquor—*Polysulfides of Calcium and Sodium.*
Yellow Prussiate—*Potassium Ferrocyanide.*
Yellow Wash—*A mixture of Mercuric Chloride and Lime Water.*

Hydrogen Compounds

Hydrogen Dioxide 18.01
Hydrogenii Dioxidum
Hydrogen Peroxide
Peroxide
Bleach Liquor
Hydrogen Chloride 36.47
Hydrogenii Chloridum
Hydrochloridum Acidum
Chlorhydric Acid
Hydrochloric Acid
Muriatic Acid
Spirits of Salt
Nitro-Hydrochloric Acid
Acidum Nitro-hydrochloricum
Nitro-Muriatic Acid
Aque Regia
Hydrogen Borate 62.02
Acidum Boricum
Boric Acid
Boracic Acid
Disulfuric Acid, 170
Disulfurum Acidum
Nordhausen Sulfuric Acid
Nordhousen Sulfuric Acid
Nordhausen Oil of Vitriol
Pyrosulfuric Acid

Hydrogen Nitrate 63.02
Hydrogenii Nitras
Acidum Nittricum
Nitric Acid
Aqua Fortis
Hydrogen Sulfate 98.09
Hydrogenii Sulfas
Acidum Sulfurum
Sulfuric Acid
Oil of Vitriol
Hydrogen Phosfate 98.14
Acidum Phosforicum
Common Phosforic Acid
Phosforic Acid
Orthophosforic Acid
Tribasic Phosforic Acid

CROSS INDEX OF CHEMICAL TERMS

This cross-index was prepared as an aid in finding true chemical names and other synonyms associated with them. Only those chemical compounds whose name does not indicate their true chmeical terms are listed.

Some general titles are:

"Butter" of a metal refers to the Chloride.

"Calcined" of a metal refers to the Oxide.

"Caustic" of a metal refers to the Hydroxide.

"Flowers" of a metal refers to the Oxide.

"Muriate" of a metal refers to the Chloride.

"Vitroliate" of a metal refers to the Sulfate.

Acid Carbonate of Potash—Potassium Bicarbonate.

Acid Carbonate of Soda—Sodium Bicarbonate.

Acid Potassium Sulfate—Potassium Bisulfate.

Acid Potassium Tartrate—Potassium Bitartrate.

Alabaster—Calcium Sulfate.

Alum—Potassium Aluminum Sulfate.

Alumen—Potassium Aluminum Sulfate.

Alum Flour—Potassium Aluminum Sulfate.

Alum Meal—Potassium Aluminum Sulfate.

Alumina—Aluminum Oxide.

Aluminite—Potassium Aluminum Sulfate.

Alumini Ustum—Dried Potassium Aluminum Sulfate.

Amido Chloride of Mercury—Ammonium Mercuric Chloride.
Ammoniated Mercury — Ammonium Mercuric Chloride.
Ammonio-Chloride of Mercury — Ammonium Mercuric Chloride.
Anglisite—Lead Sulfate.
Anhydride of Antimony—Antimony Tioxide.
Anhydrous Arsenic Acid—Arsenic Oxide.
Anhydrous Arsenious Acid—Arsenious Oxide.
Anhydrous Arsenicosm—Arenious Oxide.
Anhydrous Calcium Sulfate—Dried Calcium Sulfate.
Anhydrous Chromic Acid—Chromic Trioxide.
Antimony Black—Antimony Sulfide.
Antimony Bloom—Antimony Trioxide.
Antimony Grance—Antimony Trisulfide.
Antimony Red—Antimony Pentasulfide.
Antimony Vermilion—Antimony Trisulfide.
Antichlor—Sodium Thiosulfate.
Aqua Calcis—Calcium Hydroxide.
Aragonite—Calcium Carbonate.
Arsenic—Arsenious Oxide.
Arsenic Anhydride—Arsenic Oxide.
Arsenic Blanc—Arsenious Oxide.
Arsenic Orange—Arsenic Trisulfide.
Arsenic Yellow—Arsenic Trisulfide.
Arsenious Acid—Arsenous Oxide.
Arsenious Anhydride—Arsenious Oxide.
Asbolite—Cobalt Oxide.

Barite—Barium Sulfate.
Baryta—Barium Oxide.
Barytes—Barium Oxide.
Badic Carbonate of Magnesium—Magnesium Carbonate.
Bichloride of Mercury—Mercuric Chloride.
Bihydrate of Lime—Dried Calcium Sulfate.
Biniodide of Mercury—Mercuric Iodide.
Binoxide of Lead—Lead Dioxide.
Binoxide of Manganese—Manganese Dioxide.
Bismuth Yellow—Bismuth Trioxide.
Bismuth White—Basic Bismuth Nitrate.
Bismutite—Basic Bismuth Carbonate.
Bitter Salts—Potassium Chloride, also Magnesium Sulfate.
Blanc Fixe—Barium Sulfate.
Black Lead—Lead Dioxide.
Black Oxide of Cobalt—Cobalt Oxide.
Black Oxide of Copper—Curpic Oxide.
Bleaching Powder—Calcium Hypochlorite.
Black Mercury—Ammonium Mercurous Chloride.
Black Precipitate—Ammontium Mercurous Chloride.
Black Oxide of Mercury—Mercuric Oxide.
Blue Coppras—Copper Sulfate.
Blue Salts—Nickel Sulfate.
Blue Stone—Copper Sulfate.
Blue Vitriol—Copper Sulfate.
Bone Ash—Calcium Phosfate.

Bone Earth—Calcium Phosfate.
Brilliant Scarlet—Mercuric Iodide.
Brown Acetate—Calcium Acetate.
Brown Lead Oxide—Lead Oxide.
Butter of Antimony—Antimony Chloride.
Butter of Arsenic—Arsenic Chloride.
Butter of Cadmium—Cadmium Chloride.
Butter of Chrome—Chromium Chloride.
Butter of Cobalt—Cobalt Chloride.
Butter of Silver—Silver Chloride.
Butter of Zinc—Zinc Chloride.
Burnt Alum—Dried Potassium Aluminum Sulfate.
Burnt Lime—Calcium Oxide.

Cadmium Yellow—Cadmium Sulfide.
Cake Alum—Aluminum Sulfate.
Calcite—Calcium Carbonate.
Calcined Gypsum—Dried Calcium Sulfate.
Calcined Magnesium—Magnesium Oxide.
Calcined Mercury—Mercuric Oxide.
Calcined Plaster—Dried Calcium Sulfate.
Calomel—Mercurous Chloride.
Calomelas—Mercurous Chloride.
Calx Chloride—Calcium Hypochlorite.
Calx Chlorinata—Calcium Hypochlorite.
Calx Chlorate—Calcium Hypochlorite.
Calx Extincta—Calcium Hydroxide.
Calx Vismuthi—Basic Bismuth Nitrate.
Cake Alum—Aluminum Sulfate.

Capillary Pyrites—Nickel Sulfide.
Caustic—Sodium Hydroxide.
Caustic Antimony—Antimony Chloride.
Caustic Baryta—Barium Hydroxide, also Barium Oxide.
Caustic Potash—Potassium Hydroxide.
Caustic Soda—Sodium Hydroxide.
Ceruse—Lead Carbonate.
Cerussite—Lead Carbonate.
Chili Saltpetre—Sodium Nitrate.
Chloralum—Aluminum Chloride.
Chlorinated Lime—Calcium Hypochlorite.
Chloride of Lime—Calcium Hypochlorite.
Chrome Green—Chromium Trioxide.
Chrome Yellow—Lead Chromate.
Chromic Acid—Chromium Trioxide.
Chromic Anhydride—Chromium Triovide.
Cinnabar—Cobalt Oxide.
Common Alum—Aluminum Sulfate.
Common Salt—Sodium Chloride.
Concentrated Alum—Aluminum Sulfate.
Constant White—Barium Sulfate.
Coppras—See Ferrous Sulfate.
Crocosite—Lead Chromate.
Corundum—Aluminum Oxide.
Corrosive Sublimate—Mercuric Chloride.
Cosmetic Bismuth—Basic Bismuth Chloride.
Cream of Tartar—Potassium Bitartrate.
Cremor Tartari—Potassium Bitartrate.
Crocus of Antimony—Antimony Sulfide.

Crocus Ferri—Ferric Oxide.
Crocus Martis—Ferric Oxide.
Crude Antimony—Antimony Sulfide.
Crystal Carbonate—Sodium Carbonate.
Cube Alum—Aluminum Potassium Sulfate.
Cubic Nitre—Sodium Nitrate.

Diacetate of Lime—Calcium Acetate.
Diarsenious Disulfide—Arsenic Disulfide.
Diaspori—Aluminum Hydrate.
Diasotizing Salts—Sodium Nitrate.
Diuretic Salts—Potassium Acetate.
Deuto-joduretum Hydrargyri—Mercuric Iodide.
Dried Alum—Dried Potassium Aluminum Sulfate.

Electrolytic Salts—Nickel Sulfate.
Emetic Tartar—Antimony Potassium Tartrate.
English White—Calcium Carbonate.
Epsom Salts—Magnesium Sulfate.
Ethiop's Salts—Mercury Sulfide.
Exsiccated Alum—Dried Potassium Sulfate.

Factitious Cinnabar—Mercuric Sulfide.
Febrigufe Salt—Potassium Chloride.
Ferris Rubigo—Ferric Oxide.
Ferrugo—Ferric Oxide.
Fixed Mineral Alkali—Sodium Carbonate.
Flake Lead—Lead Carbonate.
Flake White—Basic Bismuth Nitrate.

Flowers of Antimony—Antimony Trioxide.
Flowers of Arsenic—Arsenious Oxide.
Flowers of Zinc—Zinc Oxide.
Fluid—Gelatine—Aluminum Acetate.
Fluor Spar—Calcium Fluoride.
Fuming Liquor of Arsenic—Arsenic Chloride.
Gibbsite—Aluminum Hydrate.

Glass of Antimony—Antimony Sulfide.
Clauber's Salt—Sodium Sulfate.
Golden Sulferet of Antimony—Antimony Pentasulfide.
Goulard's Powder—Lead Acetate.
Gray Antimony—Antimony Sulfide.
Gray Oxide of Cobalt—Cobalt Oxide.
Greenockite—Cadmium Sulfide.
Green Vitrol—Ferrous Sulfate.
Gypsum—Calcium Sulfate.

Haheman's Mercury—Ammonium Mercurous Chloride.
Heavy Magnesia—Magnesium Oxide.
Heavy Spar—Barium Sulfate.
Heavy White—Barium Sulfate.
Hepar Sulfar—Potassium Sulfide.
Horn Lead—Lead Chloride.
Horn Silver—Silver Chloride.
Hydrate of Baryta—Barium Hydrate.
Hydrargyri Praecipitatus Alum—Ammonium Mercuric Chloride.

Hydrargyri Supermurias—Mercuric Chloride.
Hydrargyri Permurias—Mercuric Chloride.
Hydrargillite—Aluminum Hydrate.
Hydrosodic Carbonate—Sodium Bicarbonate.
Hypantimonious Acid—Antimony Trioxide.
Hypo—Sodium Thiosulfate.
Hyposulfite of Soda—Sodium Thiosulfate.

Indian Red—Ferric Oxide.
Infusible White Precipitate—Ammonium Mercuric Chloride.
Iron Chloride—Ferric Chloride.
Iron Rust—Ferric Oxide.
Iron Suboxide—Ferrous Oxide.
Iron Vitrol—Ferrous Sulfate.

Jaune Brillant—Cadmium Sulfide.
Jeweler's Rouge—Ferric Oxide.

Kali Preparatum—Potassium Carbinate.
Kieserite—Magnesium Sulfate.
King's Gold—Arsenic Trisulfide.
King's Yellow—Arsenic Trisulfide.

Lapis Caustic—Silver Nitrate.
Lead Spar—Lead Carbonate.
Light Magnesium Calcined—Magnesium Oxide.
Lemon Chrome—Barium Chromate.
Leipzic Yellow—Lead Chromate.
Lime—Calcium Oxide.

Limestone—Calcium Carbonate.
Lime Water—Calcium Hydroxide.
Liver of Antimony—Antimony Sulfide.
Liver of Sulfur—Potassium Sulfide.
Luna Casutic—Silver Nitrate.

Magnesia—Magnesium Oxide.
Magnesia Ponderosa—Magnesium Oxide.
Magnesium Alba—Magnesium Carbonate.
Manganese Vitriolata—Manganese Sulfate.
Massicot—Lead Oxide.
Marble—Calcium Carbonate.
Melaconite—Cupric Oxide.
Metallum Album—Arsenious Oxide.
Milk of Barium—Barium Hydroxide.
Mineral Butter—Antimony Chloride.
Mordant Salts—Potassium Antimony Tartrate.
Muriate of Aluminum—Aluminum Chloride.
Muriate of Antimony—See Antimony Chloride.
Muriate of Arsenic—Arsenic Chloride.
Muriate of Cadmium—Cadmium Chloride.
Muriate of Calcium—Calcium Chloride.
Muriate of Cobalt—Cobalt Chloride.
Muriate of Copper—Copper Chloride.
Muriate of Iron—Iron Chloride.
Muriate of Lead—Lead Chloride.
Muriate of Lime—Calcium Chloride.
Muriate of Manganese—Manganese Chloride.
Muriate of Mercury—Mercuric Chloride.
Muriate of Silver—Silver Chloride.

Muriate of Soda—Sodium Chloride.
Muriate of Zinc—Zinc Chloride.

Natron—Sodium Carbonate.
Natron Vitrolate—Sodium Sulfate.
Natrun—Sodium Carbonate.
Neutral Sulfate of Alum—Aluminum Sulfate.
Nickel Black—Nickel Oxide.
Nigri Precipitatus—Ammonium Mercurous Chloride.
Nil Alba—Zinc Oxide.
Nil Album—Zinc Oxide.
Nitre—Potassium Nitrate.

Octahedral Alum Salt—Potassium Aluminum Sulfate.
Oil Pulp—Aluminum Acetate.
Orpimint—Arsenic Trisulfide.
Oxychloride of Bismuth—Basic Bismuth Chloride.
Oxynitrate of Bismuth—Basic Bismuth Nitrate.
Oxymuriate of Potash—Potassium Chlorate.

Panacea of Mercury—Mercurous Chloride.
Paris Yellow—Lead Chromate.
Paris White—Calcium Carbonate.
Patent Alum—Aluminum Sulfate.
Pearl Hardener—Calcium Sulfate.
Pearl White—Basic Bismuth Nitrate.
Perchloride of Iron—Ferric Chloride.

Perchloride of Mercury—Mercuric Chloride.
Periclasite—Magnesium Oxide.
Peroxide of Iron—Ferric Oxide.
Peroxide of Manganese—Manganese Dioxide.
Persulfate of Iron—Ferric Sulfate.
Phosfate of Lime—Calcium Sulfate.
Plaster of Paris—Dried Calcium Sulfate.
Plumbi Acetas—Lead Acetate.
Plumbic Acetate—Lead Acetate.
Plumbi Carbonas—Lead Carbonate.
Plumbi Carbonate—Lead Carbonate.
Plumbic Chromas—Lead Chromate.
Plumbi Chloridum—Lead Chloride.
Plumbic Chloride—Lead Chloride.
Plumbi Dioxidum—Lead Dioxide.
Plumbic Peroxide—Lead Dioxide.
Plumbi Sulfas—Lead Sulfate.
Plumbic Sulfate—Lead Sulfate.
Poison Flour—Arsenious Oxide.
Polishing Crocus—Ferric Oxide.
Potash Alum—Potassium Aluminum Sulfate.
Potassae Prussias Flava—Potassium Ferrocyanide.
Potassium Alum—Potassium Aluminum Sulfate.
Potassae Prussias Ruba—Potassium Ferricyanide.
Precipitated Chalk—Calcium Carbonate.
Printer's Acetate—Aluminum Acetate.
Proto-carbonate of Iron—Ferrous Carbonate.
Proto-chloride of Manganese—Manganese Chloride.

Proto-chloride of Mercury—Mercurous Chloride.
Proto-iodide of Mercury—Mercuric Iodide.
Protoxide of Antimony—Antimony Trioxide.
Protoxide of Copper—Cupric Oxide.
Proto-oxide of Iron—Ferric Oxide.
Proto-oxide of Mercury—Mercurous Oxide.
Psilomelane—Manganese Dioxide.
Puce—Lead Dioxide.
Purple Oxide—Ferric Oxide.
Pyrolignite of Lime—Calcium Acetate.
Pyrolusite—Manganese Dioxide.

Realgar—Arsenic Disulfide.
Red Liquor—Aluminum Acteate.
Red Iodide of Mercury—Mercuric Iodide.
Red Mercuric Iodide—Mercuric Iodide.
Red Mercuric Oxide—Mercuric Oxide.
Red Oxide of Copper—Copper Oxide.
Red Oxide of Iron—Ferric Oxide.
Red Oxide of Mercury—Mercuric Oxide.
Red Precipitate—Mercuric Oxide.
Red Prussiate of Potash—Potassium Ferricyanide.
Red Sulfide of Arsenic—Arsenic Disulfide.
Red Sulfuret of Arsenic—Arsenic Disulfide.
Rochelle Salts—Potassium and Sodium Tartrate.
Rock Alum—Aluminum Oxide.
Roman Alum—Dried Potassium Aluminum Sulfate.

Roman Vitriol—Copper Sulfate.
Rubigo—Ferric Oxide.

Sal Catharticum Amar—Magnesium Sulfate.
Sal Chalybis—Ferrous Sulfate.
Sal Culinaris—Sodium Chloride.
Sal Communis—Sodium Chloride.
Sal Diureticus—Potassium Carbonate.
Sal Glauberi—Sodium Sulfate.
Sal Prunella—Potassium Nitrate.
Sal Seignette—Potassium and Sodium Tartrate.
Salt—Sodium Chloride.
Salts—Magnesium Sulfate.
Salt Cake—Sodium Sulfate.
Saltpetre—Potassium Nitrate.
Salts of Steel—Ferrous Sulfate.
Salts of Tartar—Potassium Carbonate.
Salts of Wormwood—Potassium Carbonate.
Salts of Vitriol—Zinc Sulfate.
Salzburg Vitriol—Copper Sulfate.
Scarlet Red—Ferric Oxide.
Scotch Soda—Sodium Carbonate.
Sesquicarbonate of Potash—Potassium Bicarbonate.
Sesquichloride of Aluminum—Aluminum Chloride.
Sesquicarbonate of Soda—Sodium Bicarbonate.
Sesquichloride of Antimony—Antimony Chloride.
Sesquichloride of Arsenic—Arsenic Chloride.

Sesquichloride of Iron—Ferric Chloride.
Sesquioxide of Iron—Ferric Oxide.
Sesquisulfate of Alumina—Aluminum Sulfate.
Sesquisulfide of Antimony—Antimony Sulfide.
Sesquisulfide of Arsenic—Arsenic Sulfide.
Sesquisulfate of Iron—Ferric Sulfate.
Silenite (native)—Calcium Sulfate.
Silver Glance—Silver Sulfide.
Slack Lime—Calcium Hydroxide.
Silicate of Soda—Sodium Silicate.
Soda—Sodium Hydroxide.
Soda—Sodium Carbonate.
Soda Crystals—Sodium Carbonate.
Sodii Bicarbonas—Sodium Bicarbonate.
Sodii Carbonas—Sodium Carbonate.
Sodii Chloridum—Sodium Chloride.
Sodii Hydras—Sodium Hydrate.
Sodii Nitras—Sodium Nitrate.
Sodii Nitris—Sodium Nitrite.
Sodii Phosfas—Sodium Phosfate.
Sodii Sulfas—Sodium Sulfate.
Sodii Thiosulfas—Sodium Thiosulfate.
Sodium Hydrate—Sodium Hydroxide.
Sodium Orthophosfate—Sodium Phosfate.
Sodium Tetrasilicate—Sodium Silicate.
Soluble Glass—Sodium Silicate.
Solution of Lime—Calcium Hydroxide.
Spanish White—Calcium Carbonate.
Spanish White—Basic Bismuth Nitrate.
Spanish Whiting—Calcium Carbonate.

Spirits of Salt—Hydrogen Chloride.
Stibnite Antimonite—Antimony Sulfide.
Stibnite—Antimony Sulfide.
Stone Red—Ferric Oxide.
Subcarbonate of Bismuth—Basic Bismuth Carbonate.
Subchloride of Copper—Copper Chloride.
Subchloride of Mercury—Mercurous Chloride.
Subiodide of Mercury—Mercurous Iodide.
Suboxide of Iron—Ferrous Oxide.
Suboxide of Mercury—Mercurous Oxide.
Sulfate of Aluminum and Potassium—Aluminum Potassium Sulfate.
Sulfate of Barium—Barium Sulfate.
Sulfate of Cadmium—Cadmium Sulfate.
Sulfate of Copper—Copper Sulfate.
Sulfate of Iron—Ferrous Sulfate.
Sulfantimonious Anhydride—Antimony Sulfide.
Sulfantimonic Anhydride—Antimony Pentasulfide.
Sulfide of Antimony—Antimony Sulfide.
Sulfo-arsenious Anhydride—Arsenic Sulfide.
Sulfur Auratum—Antimony Pentasulfide.
Sulfuret of Antimony—Antimony Sulfide.
Sulfuric Acid—Hydrogen Sulfate.
Supersulfate of Potash—Potassium Bisulfate.
Supertartrate of Potash—Potassium Bitartrate.

Table Salt—Sodium Chloride.
Tartar Emetic—Potassium Antimony Tartrate.

Tartared Antimony—Potassium Antimony Tartrate.
Tartarized Antimony—Potassium Antimony Tartrate.
Tartrated Soda—Potassium and Sodium Tartrate.
Tasteless Salts—Sodium Phosfate.
Tasteless Purging Salt—Sodium Phosfate.
Terchloride of Antimony—Antimony Chloride.
Tercholride of Arsenic—Arsenic Chloride.
Teroxide of Antimony—Antimony Oxide.
Teroxide of Arsenic—Arsenic Oxide.
Teroxide of Bismuth—Bismuth Oxide.
Tersulfide of Antimony—Antimony Sulfide.
Tersulfide of Arsenic—Arsenic Sulfide.
Tersulfuret of Arsenic—Arsenic Sulfide.
Tersulfate of Iron—Ferric Sulfate.
Terra Ponderoso—Barium Sulfate.
Tricalcic Phosfate—Calcium Phosfate.
Tribasic Phosforic Acid—Hydrogen Phosfate.
Trona—Sodium Carbonate.

Ultramarine Yellow—Barium Chromate.
Unslaked Lime—Calcium Oxide.

Valentinite (Native)—Antimony Trioxide.
Venetian Red—Ferric Oxide.
Vichy Salts—Sodium Bicarbonate.
Vinegar Salts—Calcium Acetate.
Vitrolate of Aluminum—Aluminum Sulfate.

Vitrolate of Barium—Barium Sulfate.
Vitrolate of Cadmium—Cadmium Sulfate.
Vitrolate of Calcium—Calcium Sulfate.
Vitrolate of Chromium—Chromium Sulfate.
Vitrolate of Iron—Ferrous Sulfate.
Vitrolate of Lead—Lead Sulfate.
Vitrolate of Lime—Dried Calcium Sulfate.

Water Glass—Sodium Silicate.
Washing Soda—Sodium Carbonate.
Waterproofing Salts—Aluminum Acetate.
Whiting—Calcium Carbonate.
White Oxide of Antimony—Antimony Trioxide.
White Arsenic—Arsenious Oxide.
White Copperas—Zinc Sulfate.
White Lead—Lead Carbonate.
White Precipitate—Ammonium Mercuric Chloride.
White Vitriol—Zinc Sulfate.
Witherite (Native)—Barium Carbonate.
Wool Mordant—Chromium Sulfate.

Yellow Iodide of Mercury—Mercuric Iodide.
Yellow Mercuric Oxide—Mercuric Oxide.
Yellow Mercurous Iodide—Mercuric Iodide.
Yellow Oxide of Mercury—Mercuric Oxide.
Yellow Prussiate of Potash—Potassium Ferrocyanide.
Yellow Sulfide of Arsenic—Arsenic Trisulfide.

Zinci Chloridum—Zinc Chloride.
Zinci Oxidum—Zinc Oxide.
Zinc Powder—Zinc Oxide.
Zinci Sulfas—Zinc Sulfate.
Zinc White—Zinc Oxide.